



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Seal-GAU-1815

q/c  
B. Denney  
1/28/98

In re Application of:

GEERT MAERTENS  
LIEVEN STUYVER

Serial No.: 08/836,075

Filing Date: April 21, 1997

For: NEW SEQUENCES OF HEPATITIS C  
VIRUS GENOTYPES AND THEIR USE AS  
PROPHYLACTIC, THERAPEUTIC AND  
DIAGNOSTIC AGENTS

) Group Art Unit: 1815

) Examiner: M. Zeman

) Attorney Docket: INNS004/KAM

RECEIVED

JAN 12 1998

GROUP 1800

**STATEMENT AND AMENDMENT AS REQUIRED  
UNDER 37 CFR 1.821(f) AND (h)**

BOX SEQUENCE  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures dated December 4, 1997, applicants supply the enclosed Sequence Listing comprising one (1) computer readable form (diskette) and one hundred and six (106) pages. Also enclosed is a copy of the CRF Diskette Problem Report supplied with the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures dated December 4, 1997. The undersigned

CERTIFICATE OF MAILING 37 C.F.R.1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: BOX SEQUENCE Assistant Commissioner for Patents, Washington, D.C. 20231 on the date below:	
January 2, 1998	<i>Patricia A. Kammerer</i> Patricia A. Kammerer

hereby certifies that the diskette and the paper copy of the Sequence Listing submitted herewith are identical to each other. The undersigned further certifies that this sequence listing does not go beyond the disclosure in the International Application as filed.

**Amendment to the Specification:**

Applicants respectfully request the enclosed paper copy of the Sequence Listing be entered into the specification of the application and made a part thereof.

Respectfully submitted,



Patricia A. Kammerer  
Reg. No. 29,775

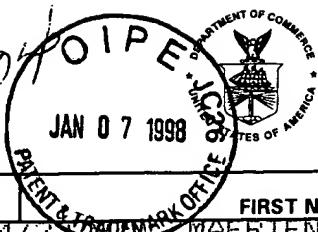
ATTORNEY FOR ASSIGNEE,  
INNOGENETICS N.V.

ARNOLD, WHITE & DURKEE  
P. O. Box 4433  
Houston, Texas 77210-4433  
(713) 787-1438

January 2, 1998

UNITED STATES DEPARTMENT OF COMMERCE  
 Patent and Trademark Office  
 COMMISSIONER OF PATENTS AND TRADEMARKS  
 Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
US 5/836,075	04/22/97	MAERTENS	INNS: 004/R4M



HEN  
INNS 004/R4M  
PATRICK A KAMMERER  
ARNOLD WHITE & DURKEE  
PO BOX 4433  
HOUSTON TX 77210-4433

18M1/1204

EXAMINER	
ZEMAN, M	
ART UNIT	PAPER NUMBER
1815	X

DATE MAILED: 12/04/97

RECEIVED

Please find below a communication from the EXAMINER in charge of this application

Commissioner of Patents 12/04/97

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). A computer readable form (CRF) of the sequence listing was submitted. However, the CRF could not be processed by the Scientific and Technical Information Center (STIC) for the reason(s) set forth on the attached CRF Diskette Problem Report.

Any inquiry concerning this communication should be directed to Examiner Mary K Zeman, Art Unit 1815 whose telephone number is (703) 305-7133.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

APPLICANT IS GIVEN ONE MONTH FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136. In no case may an applicant extend the period for response beyond the six month statutory period. Direct the response to the undersigned. Applicant is requested to return a copy of the attached CRF Diskette Problem Report with the response.

mkz  
8/4/97

Comply With Sequence Rules  
**DOCKETED**  
 FOR 1-4-98  
 BY Chu  
 CHKD. BY RF

MARIAN C. KNODE  
 SUPERVISORY PATENT EXAMINER  
 GROUP 1800

REC'D - A.W.D.

DEC 08 1997

DOCKET N-...

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s)

- 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- 7. Other: \_\_\_\_\_

**Applicant Must Provide:**

- An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

For PatentIn software help, call (703) 308-6856

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE**

PAGE: 1

**RAW SEQUENCE LISTING  
PATENT APPLICATION - US/08/836,075**DATE: 10/08/97  
TIME: 13:05:11**INPUT SET: S20848.raw**

This Raw Listing contains the General Information Section and those Sequences containing ERRORS.

*Does Not Comply  
Corrected Diskette Needed*

**SEQUENCE LISTING****3 (1) General Information:**

5 (i) APPLICANT: MAERTENS, GEERT  
6 STUYVER, LIEVEN

8 (ii) TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES  
9 AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND DIAGNOSTIC  
10 AGENTS

12 (iii) NUMBER OF SEQUENCES: 207

14 (iv) CORRESPONDENCE ADDRESS:

15 (A) ADDRESSEE: ARNOLD, WHITE & DURKEE  
16 (B) STREET: P.O. BOX 4433  
17 (C) CITY: HOUSTON  
18 (D) STATE: TEXAS  
19 (E) COUNTRY: USA  
20 (F) ZIP: 77210-4433

22 (v) COMPUTER READABLE FORM:

23 (A) MEDIUM TYPE: Floppy disk  
24 (B) COMPUTER: IBM PC compatible  
25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
26 (D) SOFTWARE: Microsoft Word 6.0 / ASCII text output

28 (vi) CURRENT APPLICATION DATA:

29 (A) APPLICATION NUMBER: 08/836,075  
30 (B) FILING DATE: 21 Apr 1997

32 (vii) PRIOR APPLICATION DATA:

33 (A) APPLICATION NUMBER: PCT/EP95/04155  
34 (B) FILING DATE: 23 Oct 1995

36 (viii) PRIOR APPLICATION DATA:

37 (A) APPLICATION NUMBER: EP 94870166.9  
38 (B) FILING DATE: 21 Oct 1994

40 (ix) PRIOR APPLICATION DATA:

41 (A) APPLICATION NUMBER: EP 95870076.7  
42 (B) FILING DATE: 28 Jun 1995

44 (x) ATTORNEY/AGENT INFORMATION:

45 (A) NAME: KAMMERER, PATRICIA A.

RAW SEQUENCE LISTING  
PATENT APPLICATION - US/08/836,075DATE: 10/08/97  
TIME: 13:05:13

INPUT SET: S20848.raw

46 (B) REGISTRATION NUMBER: 29,775  
47 (C) REFERENCE/DOCKET NUMBER: INNS:004  
48

## ERRORED SEQUENCES FOLLOW:

893 (2) INFORMATION FOR SEQ ID NO: 22:

894  
895 1 (i) SEQUENCE CHARACTERISTICS:  
--> 896 (A) LENGTH: 48 amino acids  
--> 897 (B) TYPE: amino acid  
--> 898 *delete* (D) TOPOLOGY: linear

899  
900 (ii) MOLECULE TYPE: peptide  
901  
902  
903

--> 904 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

905  
906 Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn  
907 1 5 10 15  
908  
909 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Arg Ser Leu Ala  
910 20 25 30  
911  
912 Glu Tyr Thr Cys Ala Arg Arg Gly Lys Leu Arg Arg Ser Ser Met Gly  
913 35 40 45  
914  
915

---

950 (2) INFORMATION FOR SEQ ID NO: 24:

951  
952 (i) SEQUENCE CHARACTERISTICS:  
--> 953 (A) LENGTH: 149 amino acids  
954 (B) TYPE: amino acid  
955 (D) TOPOLOGY: linear

*all next page*

956  
957 (ii) MOLECULE TYPE: peptide  
958  
959  
960

961 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

962  
963 Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser  
964 1 5 10 15  
965  
966 Ile Phe Leu Leu Ala Leu Ser Cys Leu Thr Val Pro Ala Ser Ala  
967 20 25 30  
968  
969 Val Gln Val Lys Asn Thr Ser His Ser Tyr Met Val Thr Asn Asp Cys

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/836,075DATE: 10/08/97  
TIME: 13:05:15

INPUT SET: S20848.raw

970               35               40               45  
971  
972       Ser Asn Ser Ser Ile Val Trp Gln Leu Lys Asp Ala Val Leu His Val  
973               50               55               60  
974  
975       Pro Gly Cys Val Pro Cys Glu Arg His Gln Asn Gln Ser Arg Cys Trp  
976               65               70               75               80  
977  
978       Ile Pro Val Thr Pro Asn Val Ala Val Ser Gln Pro Gly Ala Leu Thr  
979               85               90               95  
980  
--> 981       Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Ala *er* Ala Thr Val 1  
982               100              105              110  
983  
984       Cys Ser Ala Leu Tyr Val Gly Asp Phe Cys Gly Ala Val Met Leu Val  
985               115              120              125  
986  
987       Ser Gln Phe Phe Met Ile Ser Pro Gln His His Ile Phe Val Gln Asp  
988               130              135              140  
989  
990       Cys Asn Cys Ser Ile  
991               145  
992

---

1161 (2) INFORMATION FOR SEQ ID NO: 30:

1162  
1163       (i) SEQUENCE CHARACTERISTICS:  
--> 1164       (A) LENGTH: 149 amino acids  
1165       (B) TYPE: amino acid  
1166       (D) TOPOLOGY: linear  
1167  
1168       (ii) MOLECULE TYPE: peptide

*All next page*

1172       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

1173  
1174       Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser  
1175               1               5               10               15  
1176  
1177       Ile Phe Leu Leu Ala Leu Ser Cys Leu Thr Val Pro Ala Ser Ala  
1178               20              25              30  
1179  
1180       Ile Asn Tyr Arg Asn Val Ser Gly Ile Tyr Tyr Val Thr Asn Asp Cys  
1181               35              40              45  
1182  
1183       Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu  
1184               50              55              60  
1185  
1186       Pro Gly Cys Val Pro Cys Val Arg Glu Gly Asn Gln Ser Arg Cys Trp  
1187               65              70              75              80  
1188  
1189       Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu

INPUT SET: S20848.raw

1190 85 90 95  
1191  
1192 Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val  
1193 100 105 110  
1194  
--> 1195 Cys Ser Ala Leu Tyr Ile Gly Asp Xaa Cys (Xa) Gly Leu Phe Leu Val  
1196 115 120 125  
1197  
1198 Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp  
1199 130 135 140  
1200  
1201 Cys Asn Cys Ser Ile  
1202 145  
1203

## 1204 (2) INFORMATION FOR SEQ ID NO: 31:

1205  
1206 (i) SEQUENCE CHARACTERISTICS:  
--> 1207 (A) LENGTH: 447 base pairs → 448 shown  
1208 (B) TYPE: nucleic acid  
1209 (C) STRANDEDNESS: single  
1210 (D) TOPOLOGY: linear  
1211  
1212 (ii) MOLECULE TYPE: cDNA  
1213  
1214 (iii) HYPOTHETICAL: NO  
1215  
1216 (iii) ANTI-SENSE: NO  
1217  
1218  
1219  
1220 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

1221 GACGGGATCA ATTATGCAAC AGGGAACCTT CCCGGTTGCT CTTTTTCTAT CTTCCTCTTG 60  
1222 GCACCTCCTCT CGTGCCTGAC TGTTCCCGCT TCGGCCATTAA ACTACCGCAA CACCTCGGGC 120  
1223 ATCTACCACG TCACCAATGA CTGCCGAAC TCGAGCATAG TTTATGAGGC CGACCACAC 180  
1224 ATCTTGACCC TTCCAGGTTG CGTGCCTGCT GTGAGAACCTG GGAATCAGTC ACGTTGCTGG 240  
1225 GTGGCCCTTA CTCCTACCGT CGCAGCGCCA TACATCGGGC CACCGCTTGA GTCTCTGCGG 300  
1226 AGTCATGTGG ATCTGATGGT GGGGGCTGCC ACTGTTGCT CAGCCCTTTA CATCGGGGAT 360  
1227 --> 1227 TTGTGTGGCG CCTTGTTCTT GGTTGGTCAG ATGTTTCTT TCCGACCAACCG ACCCCACTGG 420 421  
1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 447 448  
1237 ACTGCCAGG ATTGCAATTG TTCTATC

PAGE: 1

SEQUENCE VERIFICATION REPORT  
PATENT APPLICATION US/08/836,075

DATE: 10/08/97  
TIME: 13:05:21

INPUT SET: S20848.raw

Line

Error

866            Entered (310) and Calc. Seq. Length (0) differ  
896            Unknown or Misplaced Identifier  
897            Unknown or Misplaced Identifier  
898            Unknown or Misplaced Identifier  
904            Wrong Or Missing Strandedness Value  
904            Wrong or Missing Sequence Topology  
953            Entered (149) and Calc. Seq. Length (148) differ  
981            Wrong Amino Acid Designator  
981            Wrong Amino Acid Designator  
1164            Entered (149) and Calc. Seq. Length (148) differ  
1195            Wrong Amino Acid Designator  
1207            Entered (447) and Calc. Seq. Length (448) differ  
1234            # of Sequences for line conflicts w/ running total

Original Text

(A) LENGTH: 310 base pairs  
(A) LENGTH: 48 amino acids  
(B) TYPE: amino acid  
(D) TOPOLOGY: linear  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
(A) LENGTH: 149 amino acids  
Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Ala er Ala Th  
Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Ala er Ala Th  
(A) LENGTH: 149 amino acids  
Cys Ser Ala Leu Tyr Ile Gly Asp Xaa Cys Xa Gly Leu Phe  
(A) LENGTH: 447 base pairs  
TTGTGTGGCG GCTTGTTCIT GGTTGGTCAG ATGTTT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH

## Notice of Availability of Checker Program

### Applicant Aid for Biotechnology Computer Readable Form (CRF) Sequence Listing Submissions

The Patent and Trademark Office (PTO) has developed a computer program, called Checker, that will aid applicants in identifying and correcting errors prior to making submissions for compliance with the Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures (Sequence Rules: 37CRF 1.821 through 1.825).

Final rules were published in the *Federal Register* (55 FR18230) on May 1, 1990, and in the PTO *Official Gazette* (1114 Off.Gaz.PatOffice 29) on May 15, 1990.

Checker is a DOS-based software program that is intended to assist users in determining whether errors may be present in the sequence listings, and is not intended to guarantee that the submission is error-free.

The most current version of the software is available via computer downloading, details are below. Copies on diskette are also available. Updated software versions will not be automatically mailed out; any updates will be announced in the PTO *Official Gazette*.

The software can be accessed/requested from the following locations:

- 1) Dial-up access through the Internet. Location is <ftp://ftp.uspto.gov>  
The software is in current directory: pub/checker/  
Download all the files. Cost: Free-of-charge
- 3) For diskette copies, mail to: U.S.P.T.O., OEIP, CRYSTAL PARK 3, SUITE 441  
WASHINGTON DC 20231

**COST FOR DISKETTE IS \$ 25.00**

**METHOD OF PAYMENT:**

Check payable to Commissioner of Patents and Trademarks  
VISA/ Mastercard/ Charge- Charges can be faxed to 703-306-2737  
PTO Deposit Account

*For Further Information, Contact: Arti Shah at 703-308-4212*